RISING STARS Mathematical Operations

Workbook for Grade 1

Workbook A

Author: Paul Broadbent

Emkay Books sample

Every effort has been made to trace all copyright holders, but if any have been inadvertently overlooked, the Publishers will be pleased to make the necessary arrangements at the first opportunity.

Although every effort has been made to ensure that website addresses are correct at time of going to press, Rising Stars cannot be held responsible for the content of any website mentioned in this book. It is sometimes possible to find a relocated web page by typing in the address of the home page for a website in the URL window of your browser.

Hachette UK's policy is to use papers that are natural, renewable and recyclable products and made from wood grown in well-managed forests and other controlled sources. The logging and manufacturing processes are expected to conform to the environmental regulations of the country of origin.

Year 1
ISBN: 978-1-51041-990-2
Text, design and layout © Hodder & Stoughton Limited (for its Rising Stars imprint) 2020

First published as Year 2 (ISBN: 978-1-78339-813-3) by
Rising Stars, part of the Hodder Education Group,
An Hachette UK Company
Carmelite House
50 Victoria Embankment
London EC4Y 0DZ
www.risingstars-uk.com
Impression number 10 9 8 7 6 5 4
Year 2022 2021

Author: Paul Broadbent
Programme consultants: Cherri Moseley, Caroline Clissold, Paul Broadbent
Publishers: Fiona Lazenby and Alexandra Riley
Editorial: Sue Walton, Jane Fisher, Aidan Gill

Illustrations, series and character design: Steve Evans
Text design: Words & Pictures

All rights reserved. Apart from any use permitted under UK copyright law, no part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording, or held within any information storage and retrieval system, without permission in writing from the publisher or under licence from the Copyright Licensing Agency Limited. Further details of such licences (for reprographic reproduction) may be obtained from the Copyright Licensing Agency Limited, www.cla.co.uk.

Cover design: Steve Evans and Words & Pictures

Printed by Oriental Press, UAE
Distributed by Emkay Books International
A catalogue record for this title is available from the British Library.

Emkay Books Sample

Contents

Unit 1: Comparing and ordering 4
1a Comparing numbers 4
1b Partitioning numbers 7
1c Tallest, longest, shortest 12
1d Units of time 15

Unit 2: Addition and subtraction 18
2a Fact families 18
2b Adding and subtracting ones 20
2c Adding 3 single-digit numbers 25
2d Adding and subtracting tens 28

Unit 3: Shapes all around us 31
3a Patterns 31
3b Faces, vertices and edges 33
3c Symmetry 35

Unit 4: Number and measurement 38
4a Less than and greater than 38
4b How much? 41
4c Quarter past and quarter to 44

Unit 5: Money 47
5a Patterns in calculations 47
5b Pounds and pence 52
5c Adding and subtracting money 55
5d Money problems 58

Emkay Books Sample

Unit 1

Comparing and ordering

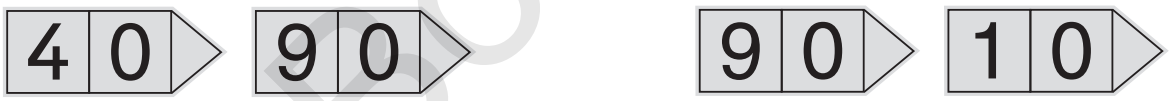
1a Comparing numbers

1

YOU WILL NEED:
- **number rods or interlocking cubes**

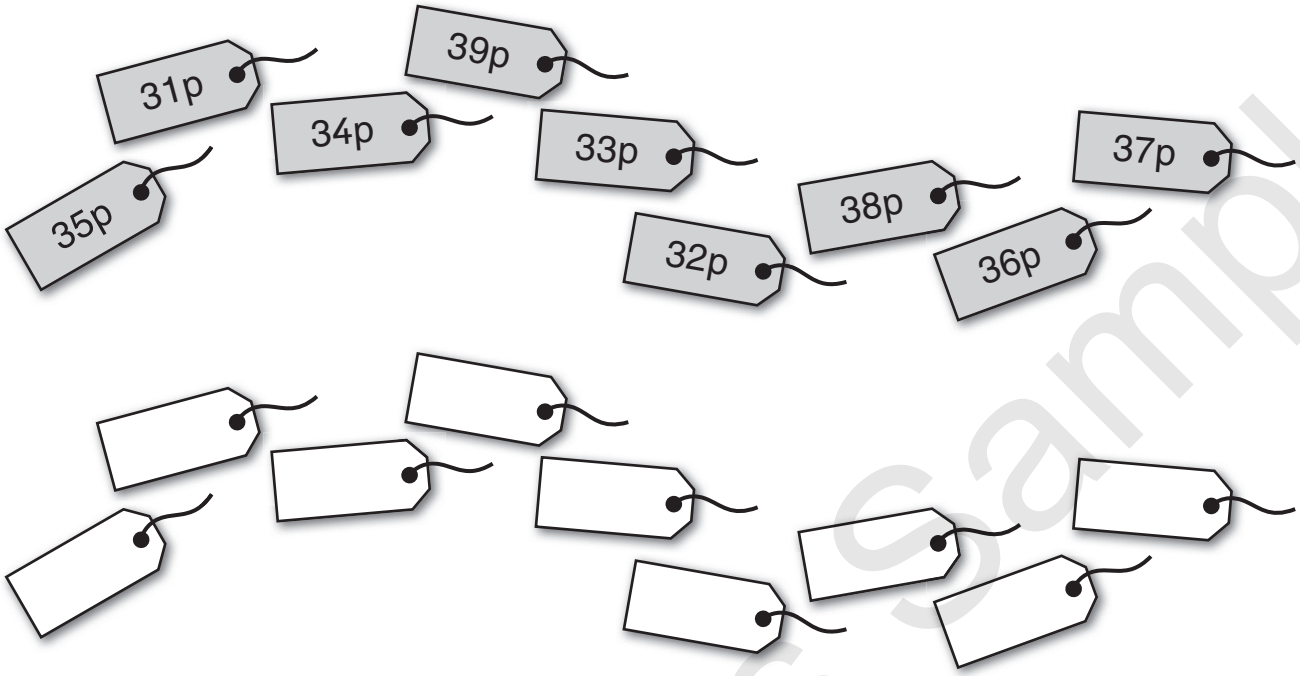
Make these numbers with rods or cubes.

Tick the larger number in each pair.



Emkay Books Sample

2 Write these price labels in order. Start with the lowest amount.



3 Write the numbers in the correct boxes.

a 67 76

☐ is greater than ☐

b 59 95

☐ is greater than ☐

c 43 34

☐ is greater than ☐

d 79 97

☐ is less than ☐

e 52 25

☐ is less than ☐

f 16 61

☐ is less than ☐

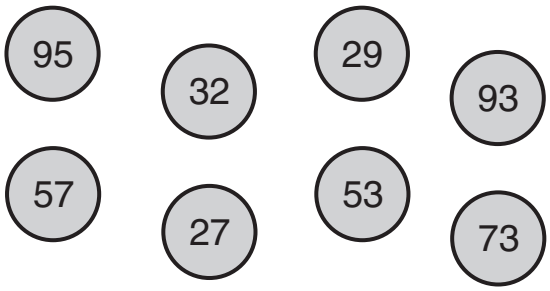
Emkay Books Sample

4

Put these numbers in order.

Start with the **greatest** number.

Use the 100 square to help you.

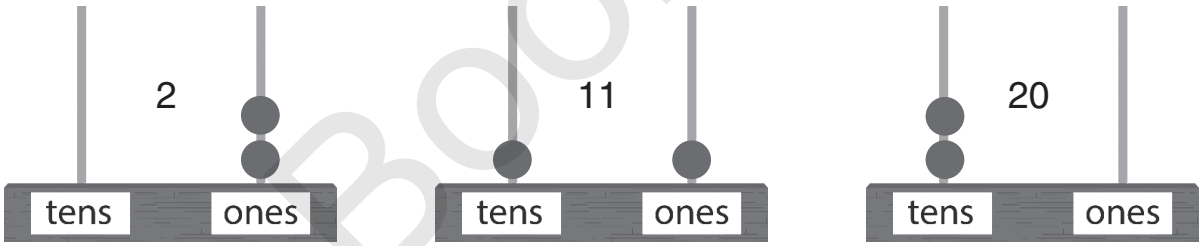


1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

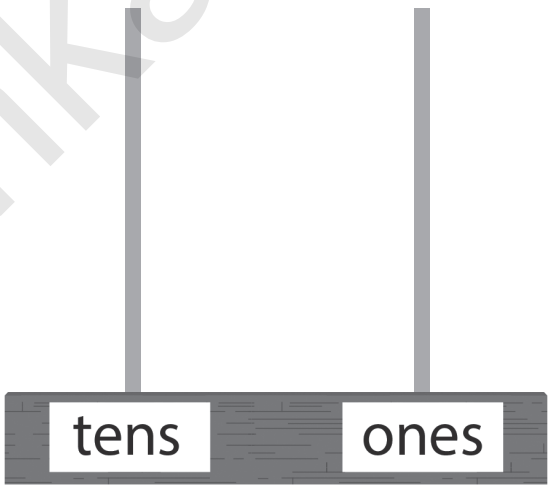
5

With 2 counters you can make 3 different numbers on this abacus.

YOU WILL NEED:
- **counters**



Use 3 counters to make different numbers on this abacus. Write them on the table.



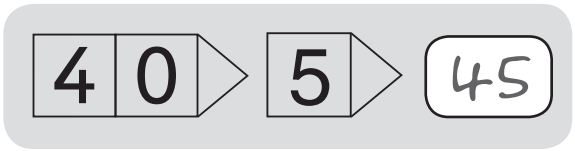
Numbers with 3 counters	Numbers with 4 counters	Numbers with 5 counters
3		
12		

Now try with 4 counters and then 5 counters.

Emkay Books Sample

1b Partitioning numbers

1 Write the numbers shown.



a

b

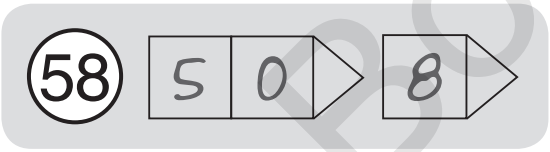
c

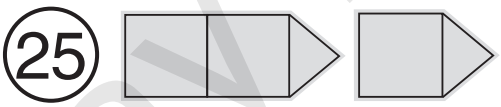
d

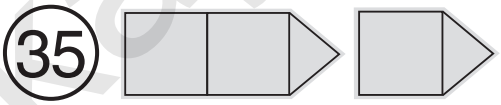
e

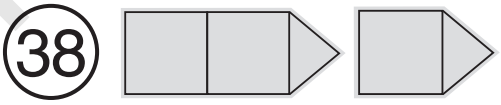
f

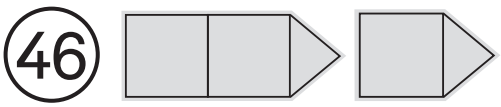
2 Partition these into tens and ones.

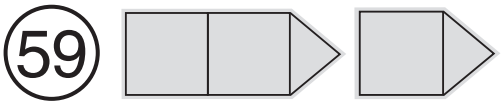


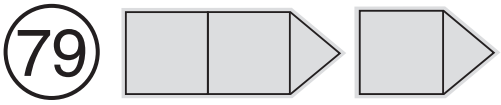
a 

b 

c 

d 

e 

f 

Emlay Books Sample

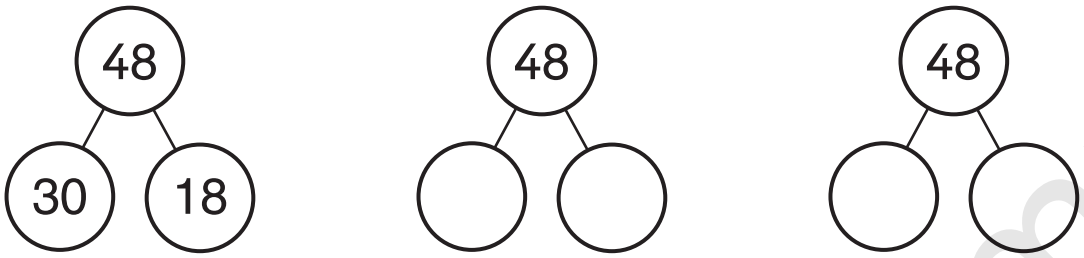
3 Partition each of these in 5 different ways.

51	54	57	58
50 and 1	50 and ☐	☐ and 7	☐ and 8
40 and 11	40 and ☐	☐ and 17	☐ and 18
30 and ☐	30 and ☐	☐ and 27	☐ and 28
20 and ☐	20 and ☐	☐ and 37	☐ and 38
10 and ☐	10 and ☐	☐ and 47	☐ and 48

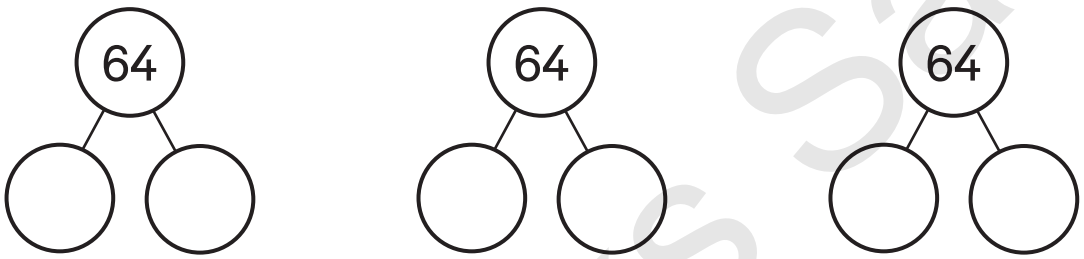
Emkay Books Sample

4 Choose 3 different ways to partition these.

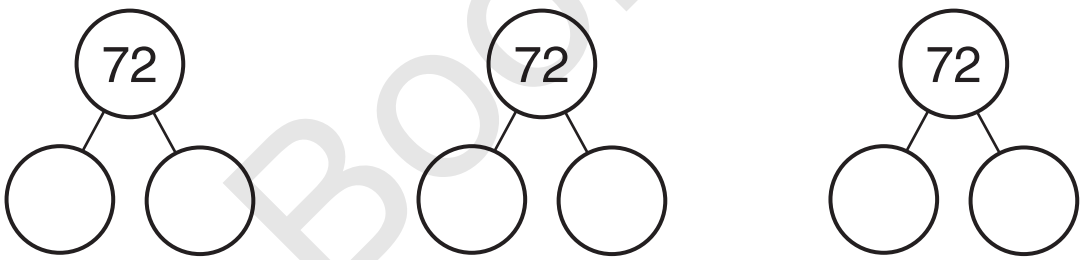
a



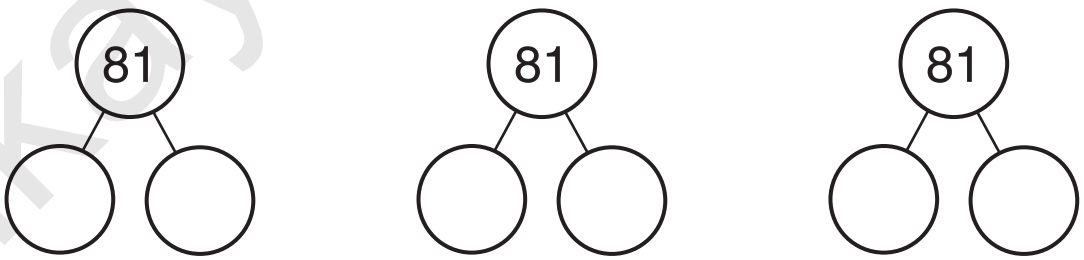
b



c



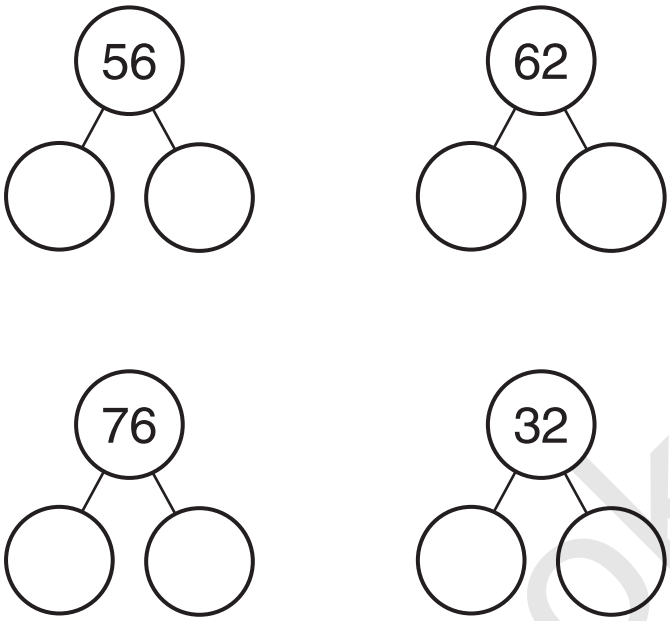
d



Emkay Books Sample

5 Use these numbers to make 56, 62, 76 and 32. You can only use each number once.

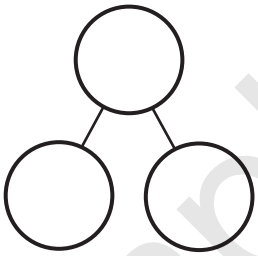
12 16 20 22 26 30 40 60



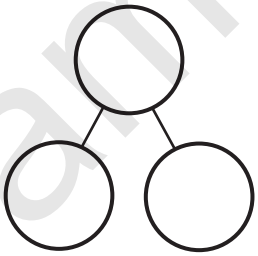
Emkay Books Sample

6 Complete these place value trees to help you solve these problems.

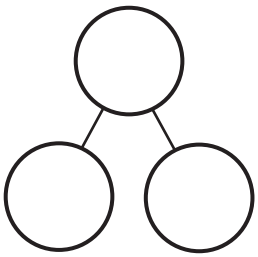
a If I spend 16p, how much do I have left?



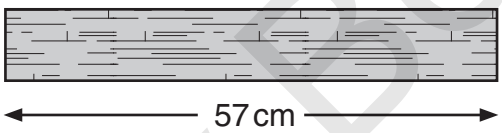
b If I spend 40p, how much do I have left?

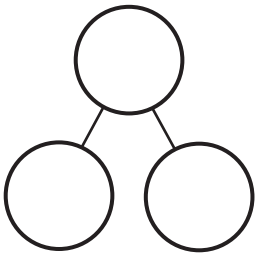


c If I spend 30p, how much do I have left?

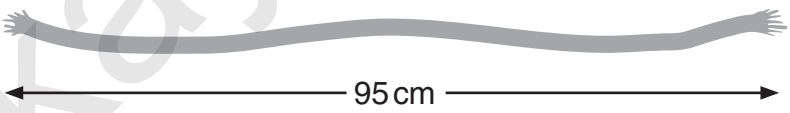


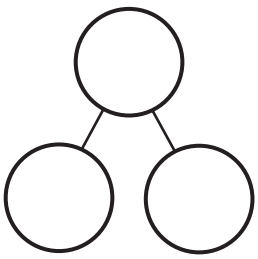
d If I cut off 47 cm, how much wood is left?



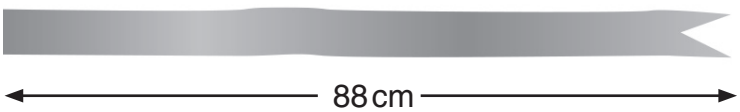


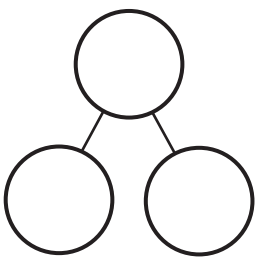
e If I cut off 20 cm, how much string is left?





f If I cut off 38 cm, how much ribbon is left?





Emka Books Sample

1c Tallest, longest, shortest

1 Partition these numbers into hundreds, tens and ones.

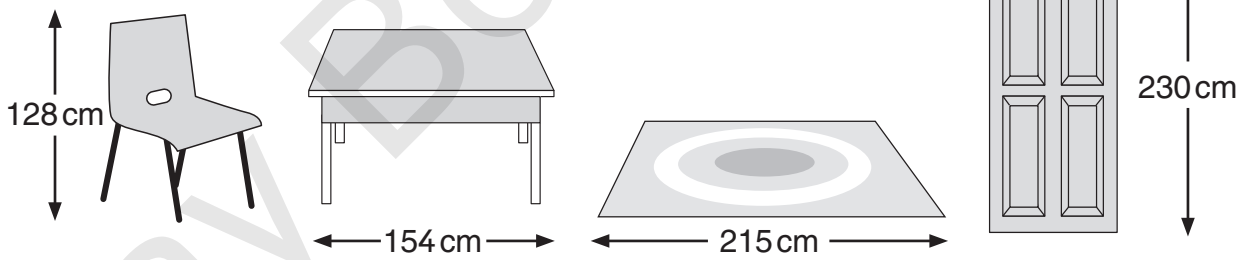
a 132

b 232

c 242

d 243

2 Look at the length and height of these.

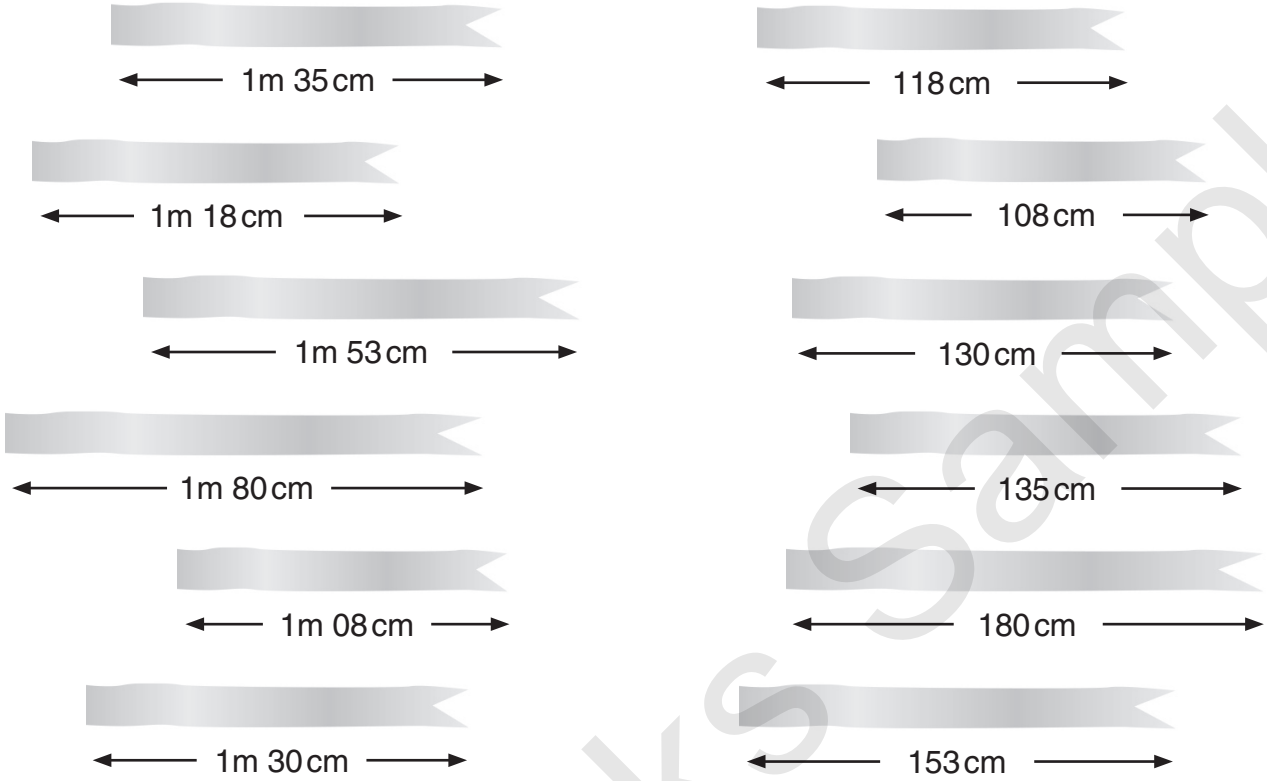


Complete this using metres and centimetres.

height 128 cm	**a** ☐ metres ☐ centimetres
length 154 cm	**b** ☐ metres ☐ centimetres
length 215 cm	**c** ☐ metres ☐ centimetres
height 230 cm	**d** ☐ metres ☐ centimetres

Emkay Books Sample

3 Join the lengths that are the same.



4 Colour each metre stick to show the fractions of 1 m.

a

$\frac{1}{4}$ m

b

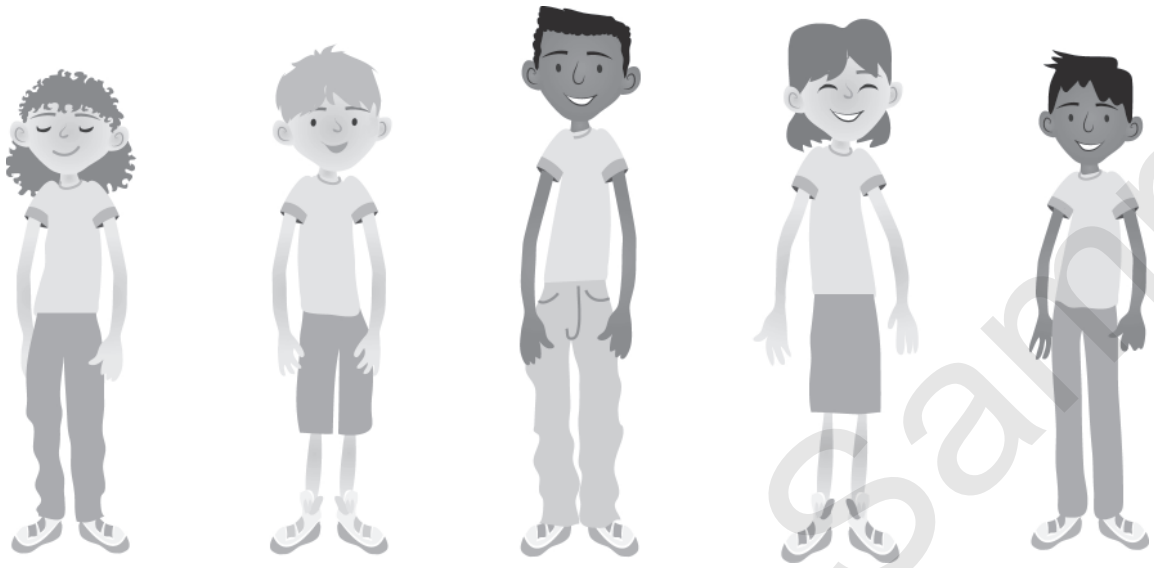
$\frac{1}{2}$ m

c

$\frac{3}{4}$ m

Emkay Books Sample

5 These are the heights of 5 children. Write them in centimetres in order of height. Start with the tallest.



Eve	Fin	Jo	Ali	Fred
1 m 8 cm	1 m 14 cm	1 m 31 cm	1 m 26 cm	1 m 18 cm

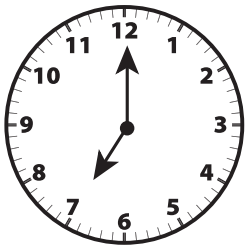
	cm
	cm
	cm
	cm
	cm

Emkay Books sample

1d Units of time

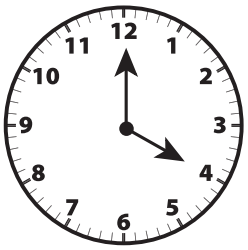
1 Write the times shown on these clocks.

a



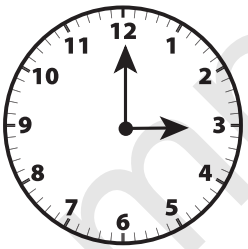
o'clock

c



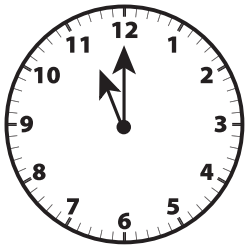
o'clock

e



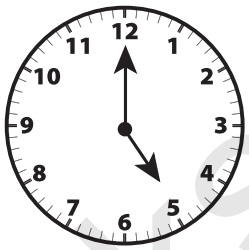
o'clock

b



o'clock

d



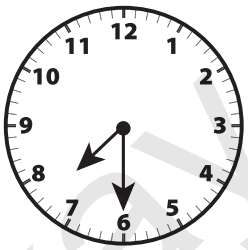
o'clock

f

o'clock

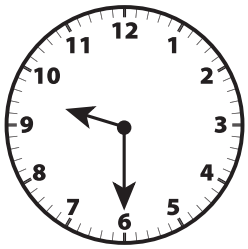
2 Write the times shown on these clocks.

a



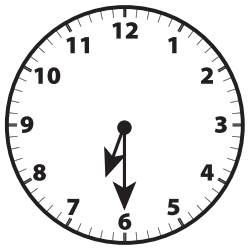
half past

c



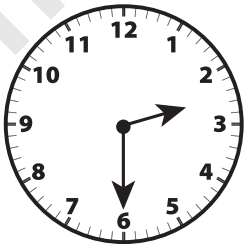
half past

e



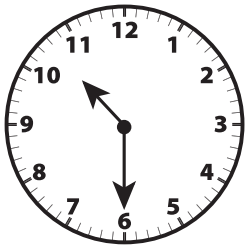
half past

b



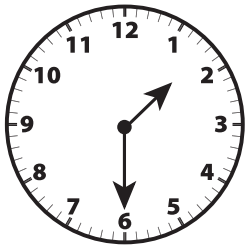
half past

d



half past

f

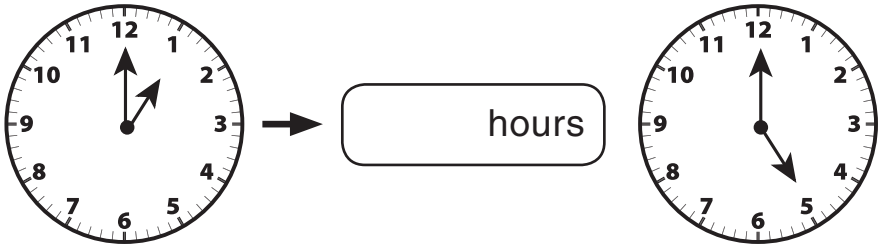


half past

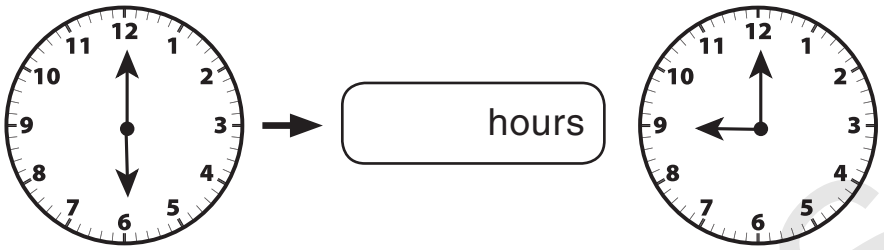
Emkay Books Sample

3 How many hours are there between these times?

a

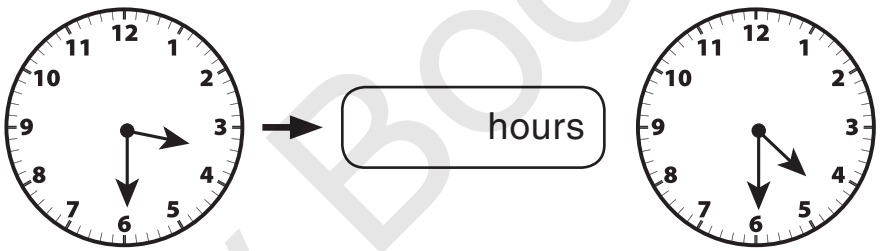


b

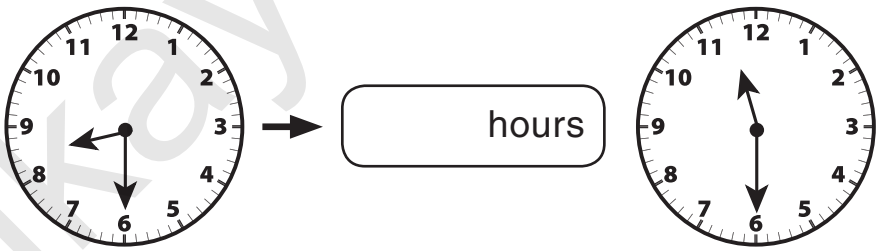


c

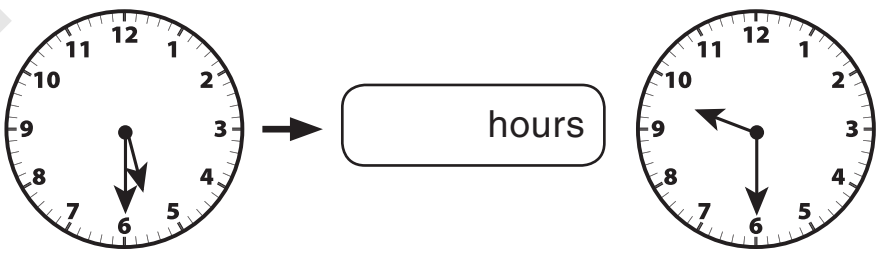
d



e

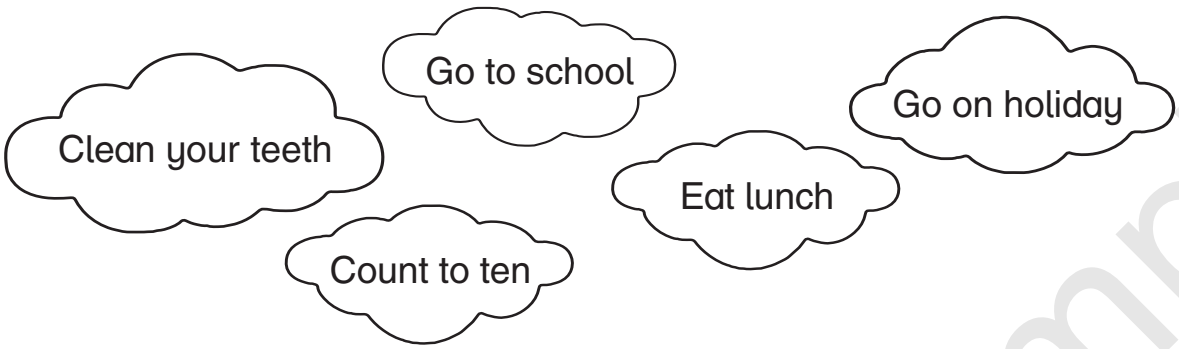


f



Emkay Books Sample

4 Order these from shortest time to longest time. Join them to the line to show the order.



Shortest time Longest time

5 How long is spent in total on each activity in each week?

	Monday	**Tuesday**	**Wednesday**	**Thursday**	**Friday**
1 hour	Badminton	Badminton	Football	Football	Badminton
1 hour	Keep fit	Keep fit	Keep fit	Keep fit	Keep fit
½ an hour	Yoga	Yoga	Yoga	Yoga	Yoga
½ an hour	Tennis	Basketball	Tennis	Basketball	Tennis
1 hour	Bowls		Bowls		

Activity	**Time (hours)**
Badminton	
Keep fit	
Yoga	
Tennis	
Bowls	
Basketball	
Football	

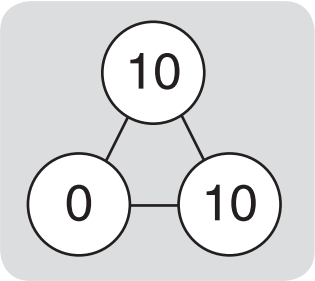
Emkay Books Sample

Unit 2

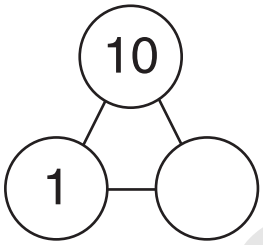
Addition and subtraction

2a Fact families

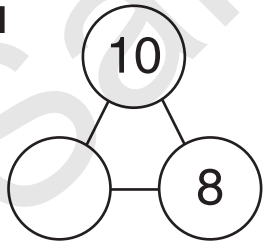
1 Write all the pairs that make 10.



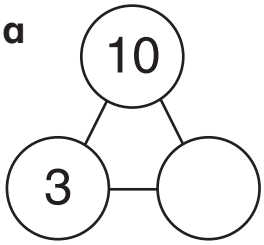
b



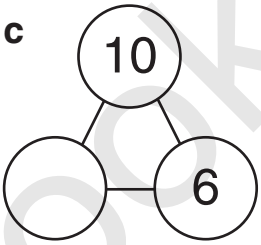
d



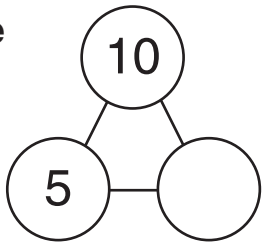
a



c



e



2 Complete these.

a $3 + 7 = 10$

$13 + 7 =$ ☐

c $6 + 4 = 10$

$16 + 4 =$ ☐

e $9 + 1 = 10$

$9 + 11 =$ ☐

b $5 + 5 = 10$

$5 + 15 =$ ☐

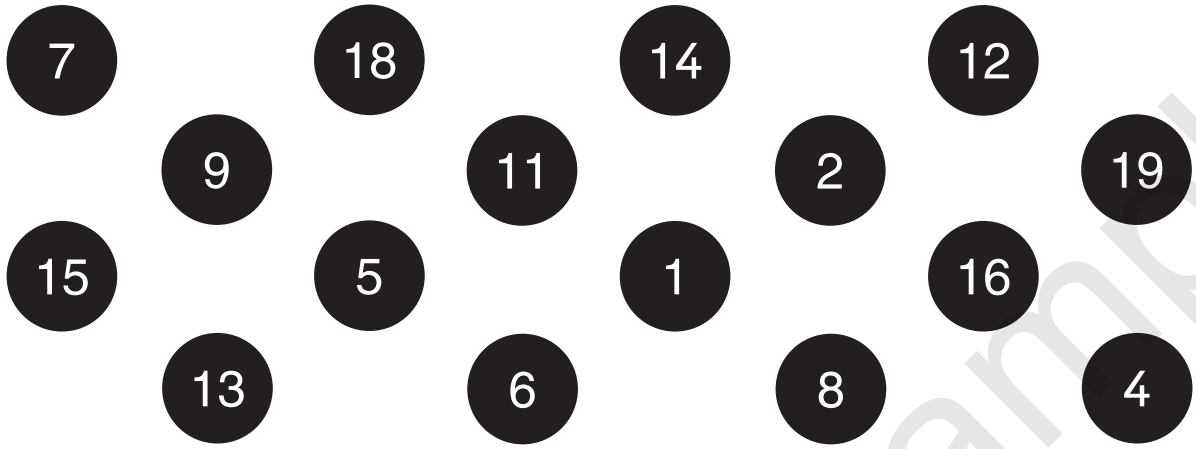
d $2 + 8 = 10$

$2 + 18 =$ ☐

What do you notice?

Enkay Books Sample

3 Join the pairs that total 20.



4 Use the bars to help complete each of these.

a

20	
4	16

4 + ☐ = ☐

☐ + 4 = ☐

☐ − ☐ = 4

☐ − 4 = ☐

b

20	
3	17

3 + ☐ = ☐

☐ + 3 = ☐

☐ − ☐ = 3

☐ − 3 = ☐

Emkay Books Sample

1

YOU WILL NEED:
- **3 coloured pencils**

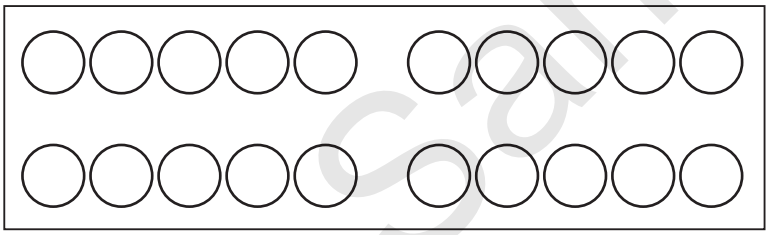
Answer these.

Colour the twenty frames for each.

a

$4 + 8 = \square$

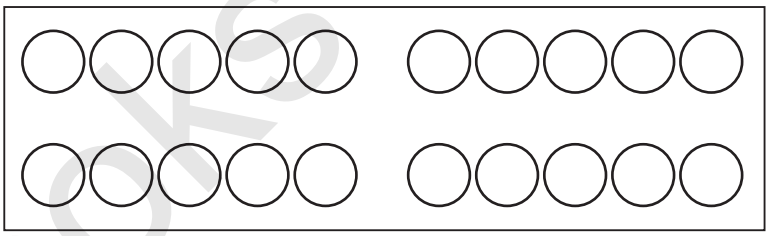
$4 + 6 + 2 = \square$



b

$5 + 9 = \square$

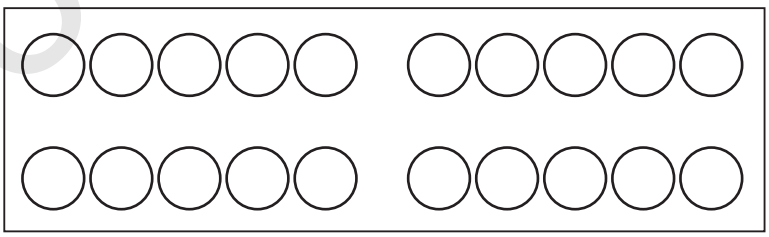
$5 + 5 + 4 = \square$



c

$7 + 6 = \square$

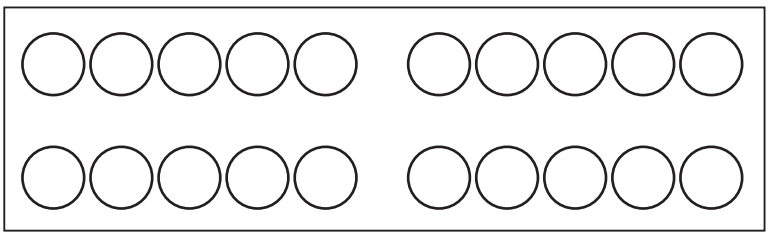
$7 + 3 + 3 = \square$



d

$6 + 9 = \square$

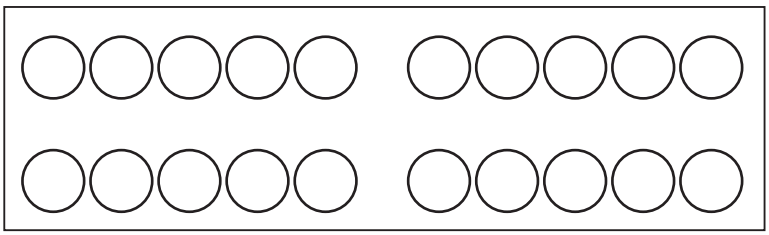
$6 + 4 + 5 = \square$



e

$7 + 4 = \square$

$7 + 3 + 1 = \square$



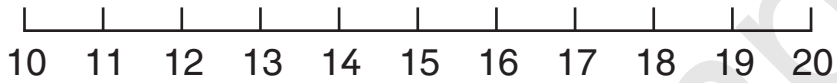
Emkay Books Sample

2

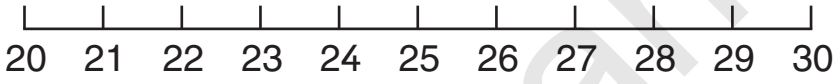
YOU WILL NEED:
- **Base 10 apparatus**

Add these by counting on.
Use Base 10 apparatus to model each one.

a ☐ = 13 + 6



b ☐ = 24 + 4



c ☐ = 22 + 7

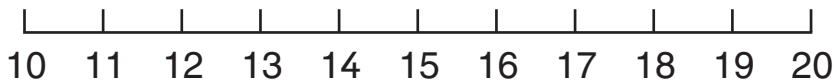
d ☐ = 31 + 6

3

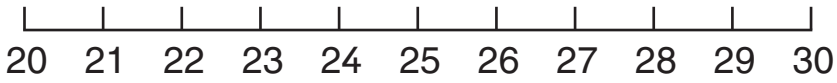
YOU WILL NEED:
- **Base 10 apparatus**

Subtract these by counting back.
Use Base 10 apparatus to model each one.

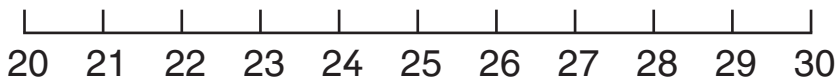
a ☐ = 19 – 6



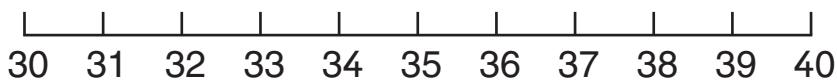
b ☐ = 28 – 4



c ☐ = 29 – 7



d ☐ = 37 – 6



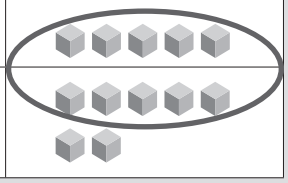
Emkay Books Sample

4 Answer these.

Use Base 10 apparatus to model each one.

YOU WILL NEED:
- **Base 10 apparatus**

Add 15 and 7

Tens	Ones
	
+	

15 + 7 = 20 + 2 = 22

a Add 16 + 8

Tens	Ones
+	

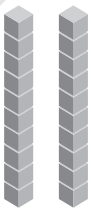
16 + 8 = 20 + ☐ = ☐

b Add 25 + 6

Tens	Ones
+	

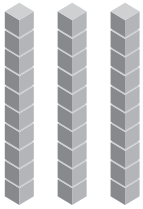
25 + 6 = 30 + ☐ = ☐

c Add 24 + 9

Tens	Ones
	
+	

24 + 9 = 30 + ☐ = ☐

d Add 36 + 8

Tens	Ones
	
+	

36 + 8 = 40 + ☐ = ☐

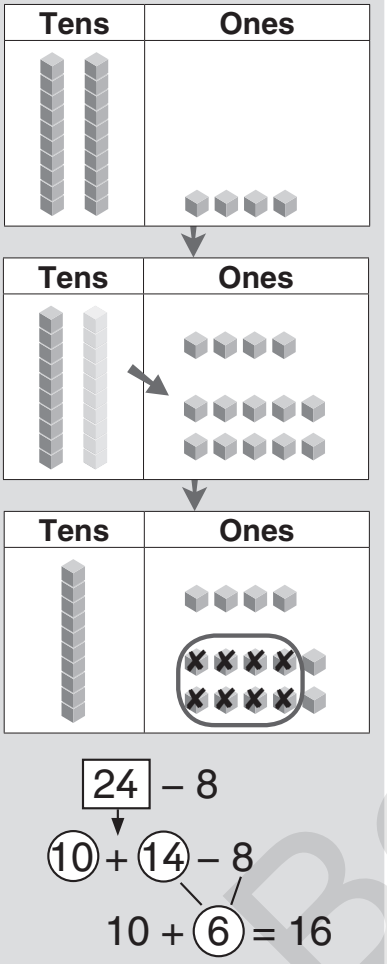
EmkayBooks Sample

5 Answer these.

Use Base 10 apparatus to model each one.

YOU WILL NEED:
- **Base 10 apparatus**

Subtract 8 from 24



$24 - 8$

$10 + 14 - 8$

$10 + 6 = 16$

a Subtract 7 from 25.

$25 - 7 =$ ☐

b Subtract 6 from 32.

$32 - 6 =$ ☐

c Subtract 8 from 36.

$36 - 8 =$ ☐

d Subtract 5 from 32.

$32 - 5 =$ ☐

Tens	Ones

Emkay Books Sample

6

YOU WILL NEED:
- **interlocking cubes**
- **counters**
- **coins**

Answer these. Use cubes, counters and coins to help you.

a Sam has 15 cubes. Jo has 8 more cubes than Sam.
How many cubes does Jo have? ☐

b Martha has 22 counters. Ravi has 6 fewer counters than Martha.
How many counters does Ravi have? ☐

c Ben has 26 coins. Jasmine has 7 more coins than Ben.
How many coins does Jasmine have? ☐

d Kate has 6 fewer cubes than Mark. Mark has 21 cubes.
How many cubes does Kate have? ☐

e Matt and Ali have 16 counters altogether. Ali has got 9 counters.
How many counters does Matt have? ☐

f Joe has 8 more coins than George. George has got 28 coins.
How many coins does Joe have? ☐

Emkay Books Sample

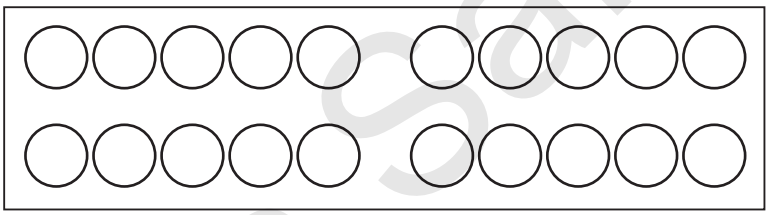
1

YOU WILL NEED:
- **3 coloured pencils**

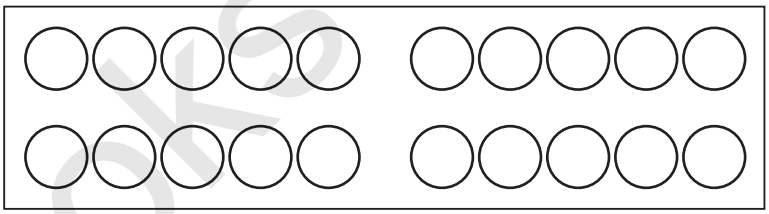
Answer these.

Look for pairs that total 10. Use three colours to show the numbers on the twenty frames.

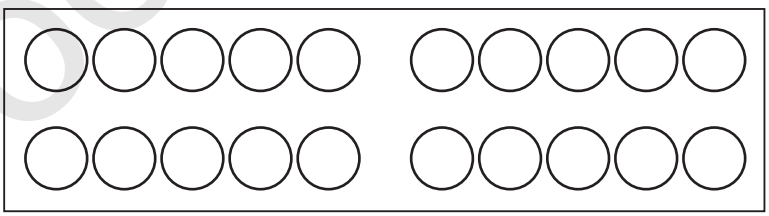
a $5 + 6 + 4 =$ ☐



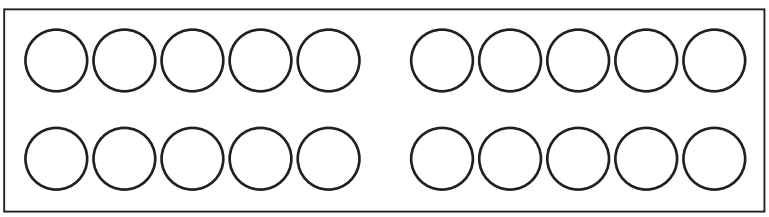
b $2 + 3 + 8 =$ ☐



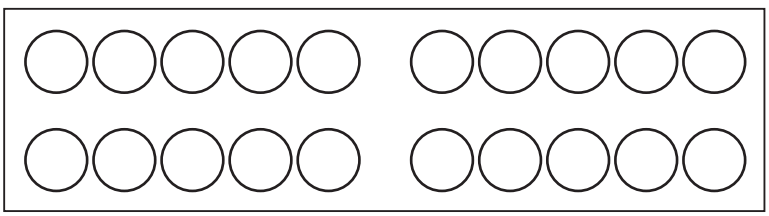
c $7 + 3 + 5 =$ ☐



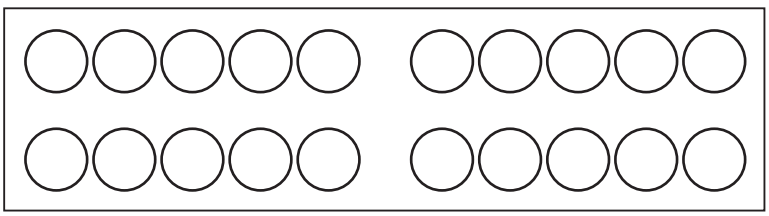
d $4 + 8 + 6 =$ ☐



e $4 + 6 + 2 =$ ☐

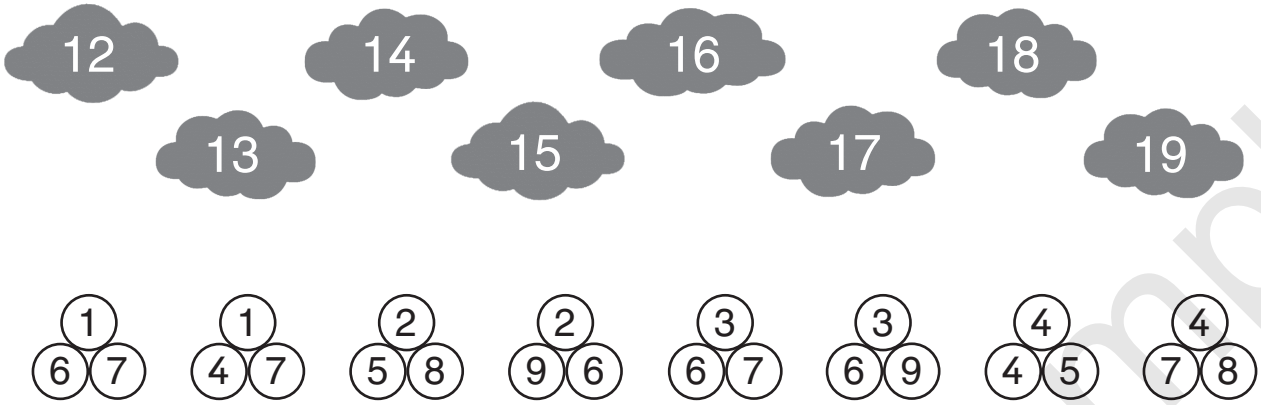


f $3 + 6 + 7 =$ ☐



Emkay Books Sample

2 Join each number to their total.



3 Answer these.

a $3 + \square + 5 = 5 + 7$

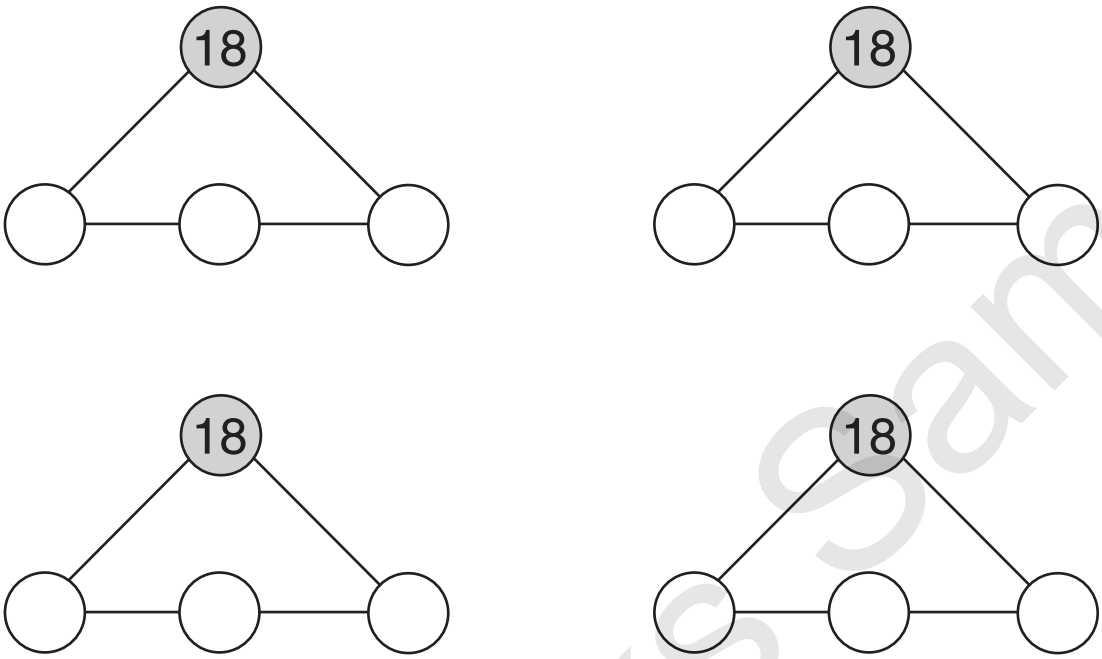
b $\square + 3 + 4 = 4 + 5$

c $4 + 5 + \square = 6 + 9$

d $5 + \square + 7 = 7 + 11$

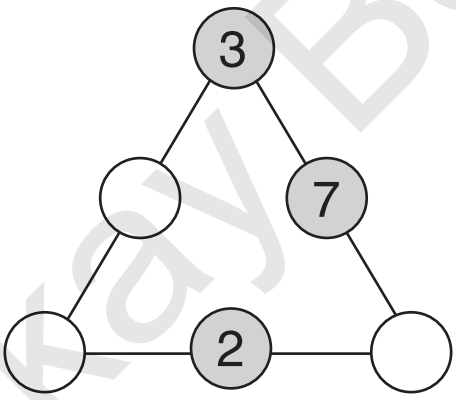
Emkay Books Sample

4 Find 4 different ways to total 18 with 3 numbers.

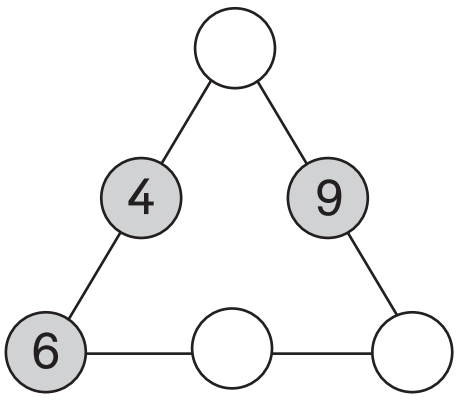


5 Complete so that the sum of the numbers on each line is 15.

a



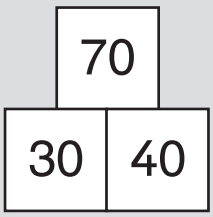
b



EmkayBooksSample

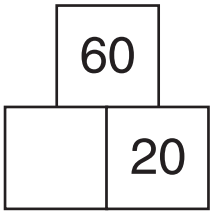
2d Adding and subtracting tens

1 The top number is the total of the two bottom numbers. Write the missing numbers.

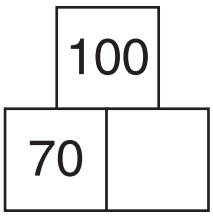


30 + 40 = 70

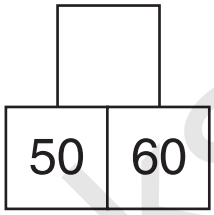
a



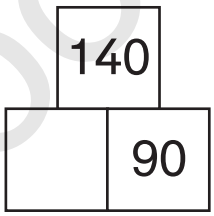
b



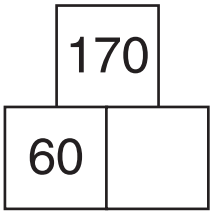
c



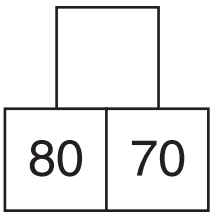
d



e



f



2 Write the missing numbers.

a

90 – ☐ = 10
90 – ☐ = 30
90 – ☐ = 50
90 – ☐ = 70

b

100 – ☐ = 90
120 – ☐ = 90
140 – ☐ = 90
160 – ☐ = 90

Emkay Books Sample

3

YOU WILL NEED:
- **Base 10 apparatus**

Add these.

Use Base 10 apparatus to help you.

a 37 + 20 = ☐

b 37 + 40 = ☐

c 57 + 40 = ☐

d 57 + 50 = ☐

e 59 + 50 = ☐

f 59 + 70 = ☐

4 Answer these. Partition them first to subtract the tens.

63 – 40 = 23

60 3

a 73 – 40 = ☐

b 79 – 50 = ☐

c 89 – 50 = ☐

d 68 – 30 = ☐

e 88 – 50 = ☐

f 99 – 60 = ☐

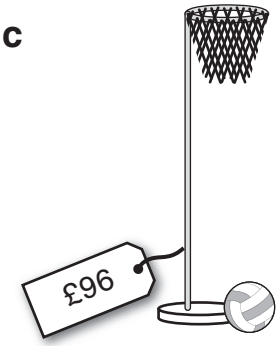
Emkay Books Sample

5 Write the new price for each item.

a

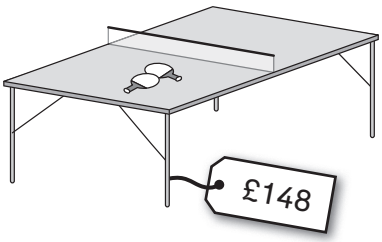
£40 off
new price
£

c



£30 off
new price
£

b



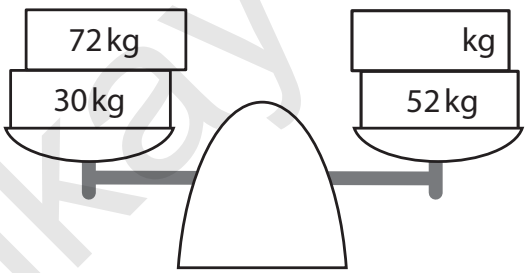
£70 off
new price
£

d

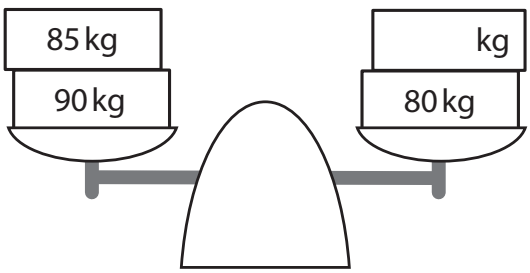
£60 off
new price
£

6 Write the missing masses so these scales are balanced.

a



b



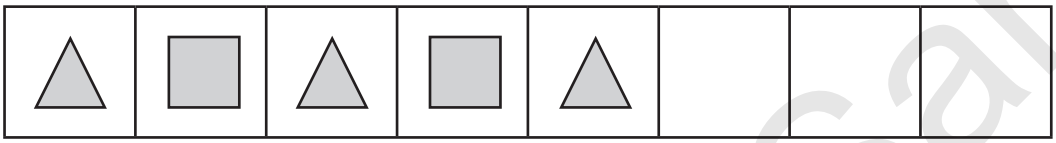
Emkay Books Sample

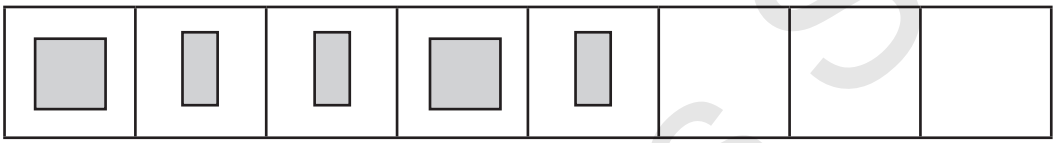
Unit 3

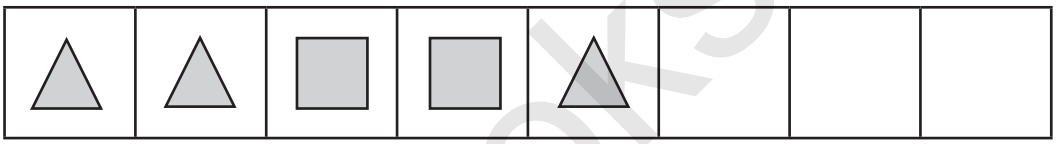
Shapes all around us

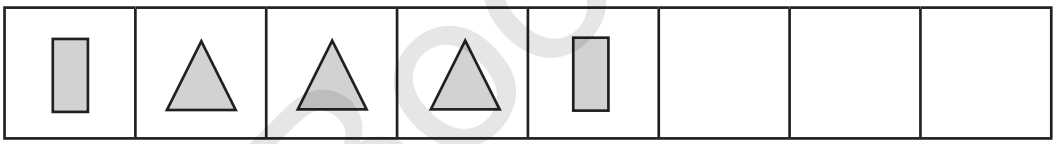
3a Patterns

1 Draw the next 3 shapes for each pattern.

a 

b 

c 

d 

2

YOU WILL NEED:
- **3 coloured pencils**

Colour these to make your own repeating pattern. Use 2 or 3 colours.

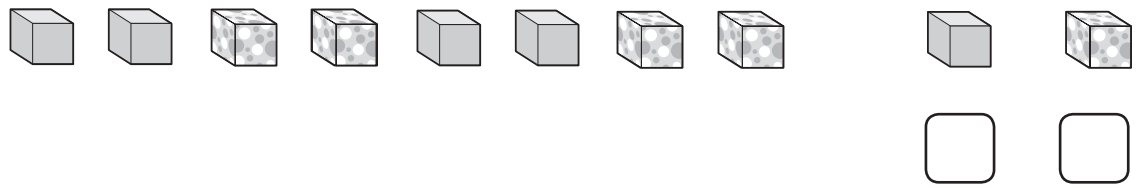
a

b

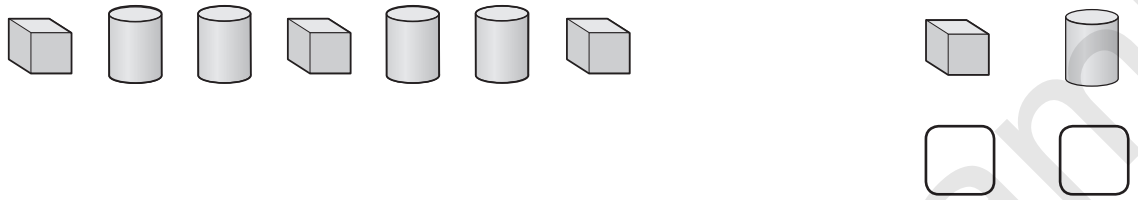
Emkay Books Sample

3 Tick the next shape in each pattern.

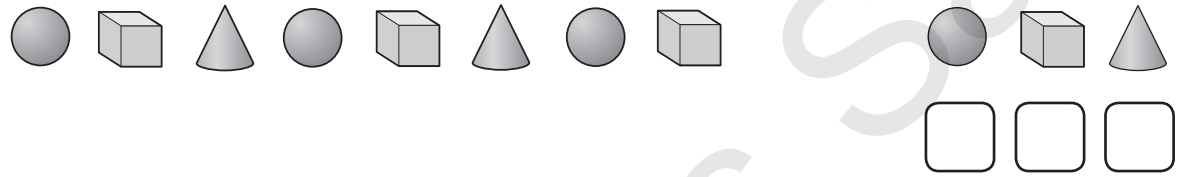
a



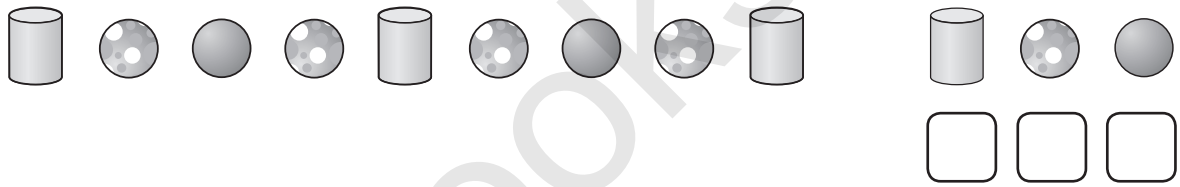
b



c



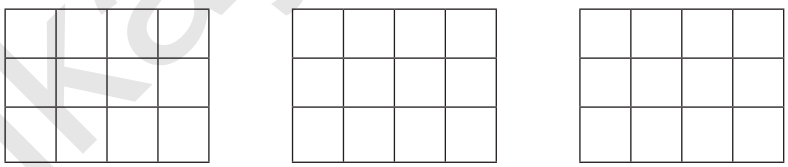
d



4

YOU WILL NEED:
- **coloured pencils**

Colour squares on these grids to make each a different pattern.
Use 1 or 2 colours.



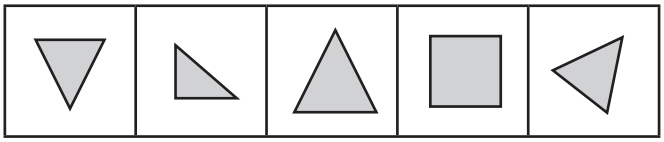
5 What will be the 10th shape in this pattern?
Draw it in the box.

Emkay Books Sample

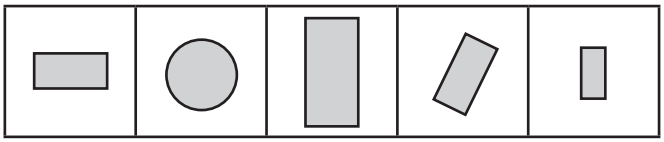
3b Faces, vertices and edges

1 Cross out the odd shape in each set. Write the name of the set of shapes.

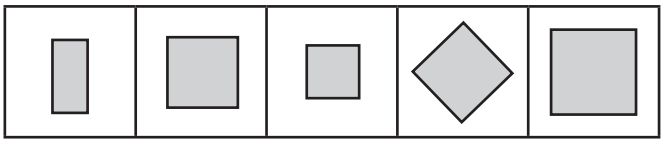
a



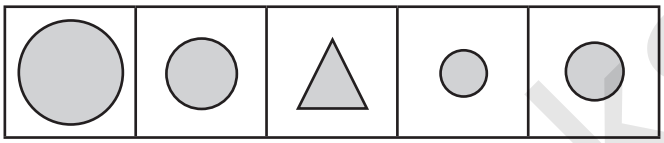
b



c



d



2 A rectangle is a 2-D shape.

Write **always, sometimes** or **never** to complete each sentence.

a A rectangle _____ has 4 corners

b A rectangle _____ has curved sides

c A rectangle _____ has 2 sides the same length

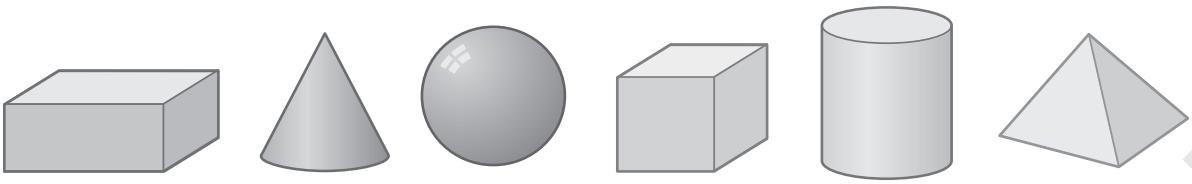
d A rectangle _____ has 4 straight sides

e A rectangle _____ looks like a square

f A rectangle _____ is the face of a cuboid

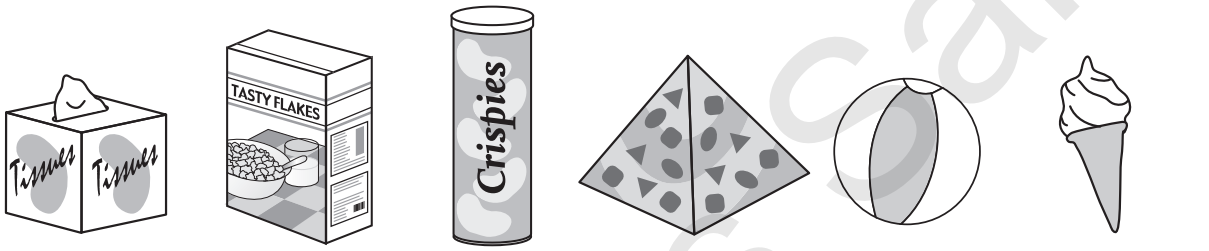
Emkay Books Sample

3 Match each shape to its name.



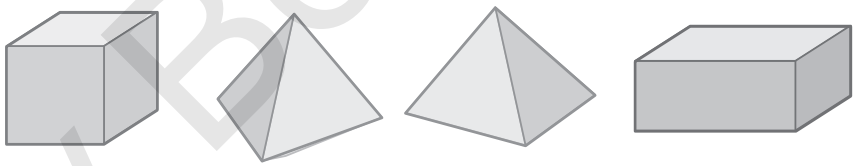
cube	cuboid	cylinder	sphere	pyramid	cone

4 Write the name of each shape.



5 Choose some different 3-D shapes that only have straight edges.

Look at them carefully and complete this table.



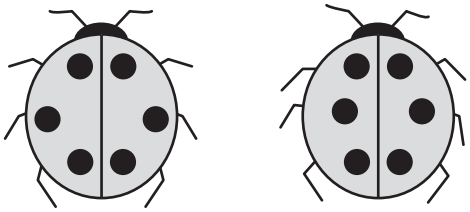
Name of shape	Shapes of faces (draw them)	Number of faces	Number of vertices	Number of edges

Emka Books Sample

3c Symmetry

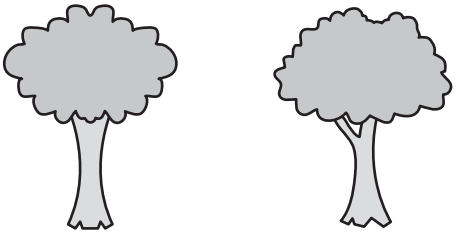
1 Look at these pictures. Tick the symmetrical shapes.

a



☐ ☐

b

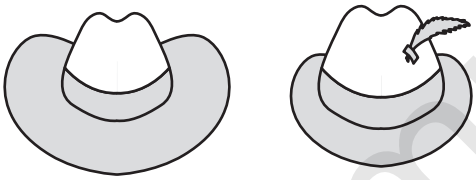


☐ ☐

c

☐ ☐

d

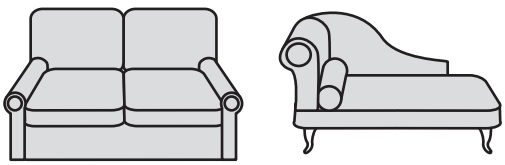


☐ ☐

e

☐ ☐

f



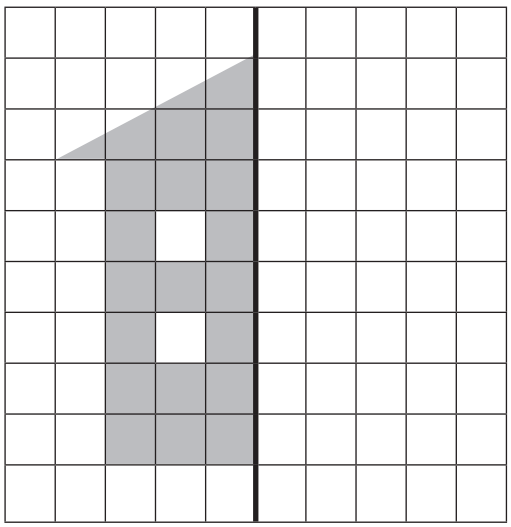
☐ ☐

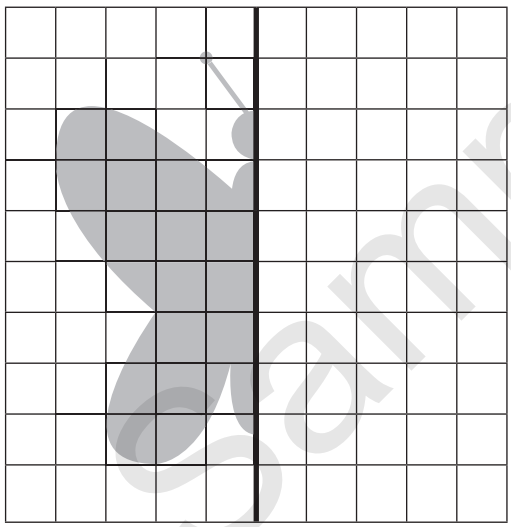
2 Draw 1 line of symmetry on each shape.

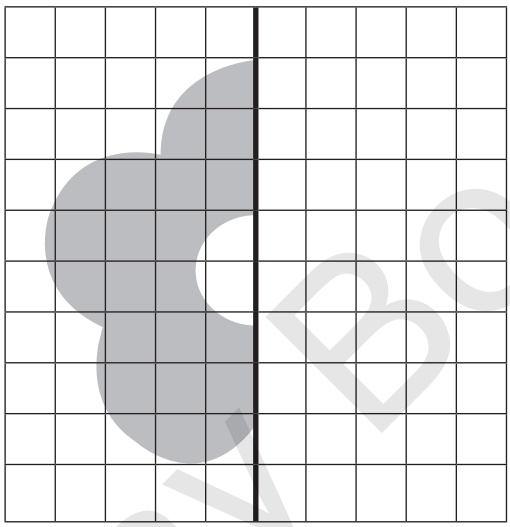
Enkay Books Sample

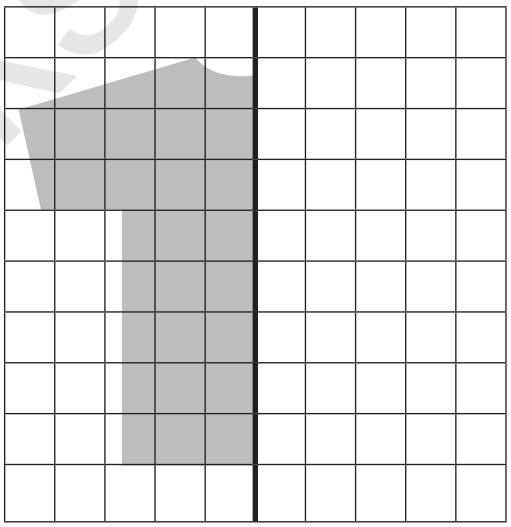
3 Each drawing can be made symmetrical.

Complete each drawing using the line of symmetry.



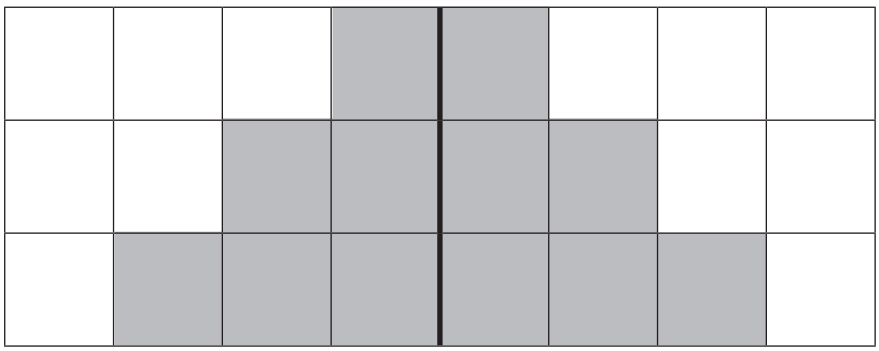




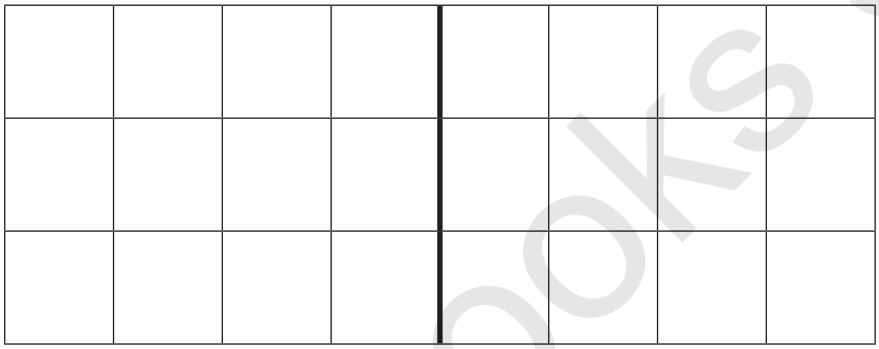


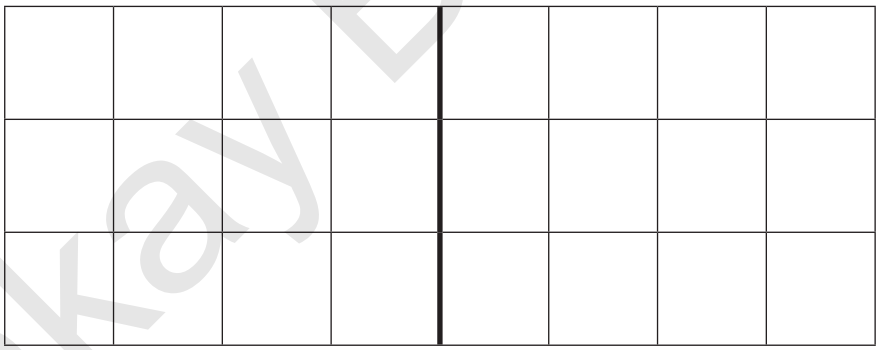
Emkay Books Sample

4 This pattern is symmetrical.



Draw your own symmetrical patterns on these grids.





Emkay Books Sample